SERGEYEVA, V.F.; ZEBREVA, A.I.

Thermodynamic properties of tin amalgams. Zhur.neorg.khim. 10 no.8:1955 Ag '65. (MIRA 19:1)

1. Submitted May 9, 1964.

SERGEYEVA, V.S.

Stock mosaic. Nauch. dokl. vys. shkoly; biol. nauki no.4:89-92 '64.
(MIRA 17:12)

1. Rekomendovana Botanicheskim sadom Moskovskogo gosudarstvennogo universiteta im. M.V. Lomonosova.

VORONTSOV, Aleksey Ivanovich, dotsent; ZINOV'YEVA, Lyubov' Afanas'yevna, kandidat biologicheskikh nauk; SERGEYEVA, Valentina Georgiyevna; KHRAMTSOV, N.N., redaktor; SVETLAYEVA, A.S., redaktor izdatel'stva; BACHURINA, A.M., tekhnicheskiy redaktor

[Manual on forest protection for laboratory and practical exercises] Posobie po lesozashchite dlia laboratorno-prakticheskikh zaniatii. Moskva, Goslesbumizdat, 1956. 84 p. (MLRA 10:2)
(Forest protection)

Country : USSR
Category : Plant Diseases. Diseases of Forest Species. O

Abs Jour : RZhBiol., No 6, 1959, No 25177

Author : Vorontsov, A. I.; Sergeyeva, V. G.
Inst : Higher School. Forest Engineering.
Title : Role of Resin Canker in the Drying of Pine Plantations.
Orig Pub : Nauch. dokl. vyssh. shkoly. Lesoinzh. delo, 1958, No. 2, 14-17

Abstract : The primary cause in the drying of pine in Moskovskaya Obalst is resin canker (the pathogenic agents are Peridermium pini and Cronartium flaccidum), which creates a favorable ground for settling of harmful insects (the bark beetle Ips acuminatus Gyll., etc.) on the tree. Pure pine plantations, 30-50 years old, are affected most by resin canker.

Card : 1/1

SERGEYEVA, V.G.

On clinical epidemiological characteristics of female patients with gonorrhea. Vest.derm.i ven 34 no.3:71-73 My-Je '60. (MIRA 13:10)

(GONORRHEA)

S/080/61/034/001/017/020
A057/A129

15.2100 1142, 1273, 1153
21.1310

AUTHORS: Sergeyeva, V.I., Glushkova, V.B., Keler, E.K.

TITLE: Physical and Technical Properties of Barium and Strontium Silicates

PERIODICAL: Zhurnal Prikladnoy Khimii, 1961, Vol. 34, No. 1, pp. 212-214

TEXT: Synthesis and sintering of single barium and strontium silicates with mineralization admixtures were investigated, and the physical and technical properties of the sintered samples were determined. Concretes containing these silicates have a greater resistance to sea water, they are heat-resistant and have X- and gamma-ray shielding properties. Besides, these silicates are used for special ceramics and phosphors. Nevertheless they are insufficiently studied. Hadley et al. [Ref.2: J.Applied Physics,27,11,1384 (1956)] briefly reported on some physical properties of barium orthosilicate. The present authors determined in previous investigations [Ref.3: ZhNKh,1,10,2283 (1956), Ref.4: ZhPKh,30,4,517 (1957)] formation conditions of barium- and strontium-silicates. In the present work the silicates were synthesized from dry silicic acid and barium- as well as strontium-carbonate in silite ovens

Physical and Technical Properties of Barium and Strontium Silicates

at 1,200°-1,400°C. The sintered material was milled by batches after each 4 hrs of sintering, briquetted (at 200 atm pressure) and sintered again to accelerate synthesis of the components. Duration of the total sintering process was 32-56 hrs. The synthesized silicates were sieved and articles were pressed at 500 atm adding 7-10% of kerosene by weight to decrease lamination of the material. The articles were fired at different temperatures, and the physical and mechanical properties were determined. In order to obtain samples of small porosity, mineralizers (Na_2CO_3, $BaCl_2$, ZnO, $SrCl_2$, MgF_2, B_2O_3, and Al_2O_3) in amounts of 1-1.5% of weight were mixed with the synthesized silicates. The strongest influence have Al_2O_3 and B_2O_3 admixtures (the latter on Ba_2SiO_4). They form a liquid phase at 1,350°-1,400°C by melting of the eutectic in this ternary system. According to these results Al_2O_3 and B_2O_3 admixtures were used to prepare sintered samples. Physical and technical properties of the investigated samples demonstrate (see Table) that additions of Al_2O_3 and B_2O_3 in the amount of 1-1.5% by weight decrease porosity, increase mechanical strength (except Ba_2SiO_4 + 1% B_2O_3) and the modulus of elasticity and bending. Al_2O_3 admixtures practically do not change the heat-re-

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Physical and Technical Properties of Barium and Strontium Silicates

Table:

Physical and technical characteristics of the samples.

(1) silicate, (2) content of mineralizer (in % of weight), (3) sintering temperature in °C, (4) water absorption according to kerosene in %, (5) apparent porosity in %, (6) true porosity in %, (7) weight by volume in g/cm³, (8) setting in %, (9) physical and technical values, (10) coefficient of expansion, (11) Poisson's ratio, (12) coefficient of shear $G \cdot 10^{-5}$ in kg/cm², (13) modulus of elasticity $E \cdot 10^{-5}$ in kg/cm², (14) compression strength σ in kg/cm², (15) number of heat changes until rupture, (16) dielectric constant ε, (17) dielectric losses tg δ, (18) temperature coefficient of dielectric constant tv$\varepsilon \cdot 10^6$, (19) melting point, (20) no admixture.

① Silicate	$BaSi_2O_5$ $d = 3.75$ T. m.p. 1420° ⑲	$BaSiO_3$ $d = 4.40$ T. m.p. 1605° ⑲	Ba_2SiO_4 $d = 5.44$ T. m.p. 1750° ⑲	$SrSiO_3$ $d = 3.63$ T. m.p. 1580° ⑲	Sr_2SiO_4 ⑲ $d = 4.57$ T. m.p. > 1750°

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Physical and Technical

Table (continued)

Содержание минерализатора (в вес. %) (2)	Температура обжига (в °С) (3)	Дополнительное по усадке (%) (4)	Кажущаяся пористость (в %) (5)	Истинная пористость (в %) (6)	Объемный вес (в г/см³) (7)	Усадка (в %) (8)	Коэффициент насыщения $\frac{a}{b} \cdot 10$ (9)
(7) Без добавки	1320	12.4	31.6	32.0	2.55	3.22	12.8
Al_2O_3 — 1	1320	1.8	5.9	—	3.27	8.7	—
(10) Без добавки	1500	7.8	25.3	26.1	3.23	4.6	15.5
Al_2O_3 — 1	1450	0.3	1.2	—	3.75	11.7	—
(11) Без добавки	1600	1.4	6.9	11.9	4.8	7.6	14.6
B_2O_3 — 1	1200	0.69	3.0	—	4.68	9.3	—
(12) Без добавки	1450	9.9	2.7	33.4	2.72	3.4	11.3
Al_2O_3 — 1	1450	0.2	0.7	—	3.18	7.8	—
(13) Без добавки	1450	7.0	23.6	27.2	3.32	5.9	12.7
Al_2O_3 — 1	1450	3.1	11.4	—	3.63	8.8	—

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Physical and Technical

Table (continued)

(2) Физико-технические величины							
(11) коэффициент Пуассона μ	(12) модуль сдвига $G \cdot 10^{-4}$ (в кг/см²)	(13) модуль упругости $E \cdot 10^{-4}$ (в кг/см²)	(14) механическая прочность $\sigma_{сн}$ (в кг/см²)	(15) количество теплосмен до разрушения	(16) диэлектрическая проницаемость ε	(17) диэлектрические потери tg δ	(18) температурный коэффициент диэлектрической проницаемости $TK_{\varepsilon} \cdot 10^{6}$
0.21	0.47	1.14	320	<25	7.1	$5 \cdot 10^{-2}$	+58
0.22	1.87	4.57	1530	<25	8.7	$5.8 \cdot 10^{-2}$	+150
0.19	0.87	2.00	540	≤25	10	$2.7 \cdot 10^{-3}$	+100
0.22	1.17	2.85	795	<25	14.2	$2.8 \cdot 10^{-3}$	+74
0.26	1.85	4.60	1000	<25	11.9	$1.7 \cdot 10^{-3}$	+19
0.26	2.40	6.05	605	11	14.7	$1.0 \cdot 10^{-3}$	+50
0.22	1.50	3.71	575	<25	6.7	$5.0 \cdot 10^{-3}$	+1230
0.26	2.84	7.13		<25	7.7	$4.4 \cdot 10^{-3}$	+1220
0.25	1.56	3.93		<25	9	$4.7 \cdot 10^{-3}$	+775
0.29	2.38	6.17		<25	11	$5.0 \cdot 10^{-3}$	+760

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L 23802-65 EWP(e)/EPA(s)-2/EWT(m)/EPF(c)/EWP(v)/EPR/EWP(j)/T Pc-4/Pr-4/
Ps-4 WW/RM/WH

ACCESSION NR: AP4049458 S/0131/64/000/011/0520/0523

AUTHOR: Bogomolov, B.N., Sergeyeva, V.M.

TITLE: Unburnt refractories with a polymer binder

SOURCE: Ogneupory*, 11, 1964, 520-523

TOPIC TAGS: refractory material, polymer binder, aluminum phosphate, unburnt refractory, binder physical property

ABSTRACT: The purpose of this study was to produce specimens of unburnt refractories with a polymer binder that were not inferior to burnt refractories. Aluminum phosphate ($AlPO_4$) was chosen as the base material for obtaining a polymer binding. The investigation included the development of a method for making the liquid binder, selection of the base refractory material, and selection of the technology, manufacture, and testing of the specimens. The binder was obtained by the reaction $Al(OH)_3 + H_3PO_4 \rightarrow AlPO_4 + 3H_2O$. The prepared binder was boiled, poured into vessels, and cooled with constant agitation. After cooling, the binder was a jelly-like, viscous material which did not solidify for a long time and was transportable. Under special heating conditions the binder solidified at 275-285C into a porous mass. The refractoriness of the binder was above 1800C, the refractoriness-under-load (2kg/cm^2) was above 1790C; no additional shrinkage was observed

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ACCESSION NR: AP4049458

at 1600C with 2-hr. holding; the thermal stability was more than 20 cycles of heating to 1300C and cooling in water; the apparent porosity was 45-50%; bulk weight was 2.18-2.28 g/cm^3, compressive strength was 80-120 kg/cm^2; bending strength, 35-50 kg/cm^2. The modulus of elasticity remained constant in the 20-1500C temperature range. The material was not electrically conductive up to 1500C, which was the limit of the experiment. Corundum, magnesite, chromite, dolomite, and forsterite were tested as the base refractory material. Corundum, sintered alumina, and various types of fireclay yielded the best results. As a result of the laboratory investigations, an effective aluminum phosphate binder and unburnt corundum and aluminophosphate refractories were obtained which were of high quality and stability. With special heat treatment in the 20-285C temperature range, the binder is polymerized, forming a stable skeleton, thus imparting high properties to the refractories. The authors considered that the sufficiently high properties and stability of the unburnt refractories obtained was due to the polymer skeleton, consisting of chains and rings of tetrahedra of $AlPO_4$ and Al_2O3. Orig. art. has: 2 tables, 1 figure and 1 chemical equation.

ASSOCIATION: Sibniitsement

SUBMITTED: 00 ENCL: 00 SUB CODE: MT

NO REF SOV: 004 OTHER: 004

Card 2/2

AUTHORS: Sergeyeva, V. M., Shtrum, Ye. L.

57-12-2/19

TITLE: A Note of the Purification of Indium and the Preparation of the InSb Compound With a High Mobility of the Electrons (Ochistka indiya i polucheniye soyedineniya InSb s bol'shoy podvizhnost'yu elektronov).

PERIODICAL: Zhurnal Tekhnicheskoy Fiziki, 1957, Vol. 27, Nr 12, pp. 2698-2701 (USSR)

ABSTRACT: The purpose of this investigation was the production of an InSb compound with a great mobility of the electrons for the production of donors for the Hall-EMF (electromotoric force). Preliminary experiments showed, that a zonal purification of the InSb compound, which was obtained by a smelting of these metals, did not furnish the desired results. Therefore an additional purification of the initial substances, essentially of the indium, being the substance, which is most impure, was conducted. For this purpose the method of metal destillation in a vacuum was employed. In spite of the high boiling point (2440° K) of indium it was possible to employ this method for the purification of the indium. For a subsequent removal of silicium and of oxygen

A Note on the Purification of Indium and the Preparation of the InSb Compound With a High Mobility of the Electrons. 57-12-2/19

temperature from 50.000 to 60.000 $cm^2/V.sec$. A certain relation exists between the mobility of the electrons and their concentration in InSb. It is shown here, that with a decrease of concentration the mobility increases. At concentrations of less than $10^{17} cm^{-3}$, however, the mobility depends very little on the electron concentration. For this reason, InSb with a carrier-concentration of the order of magnitude of $10^{16} cm^{-3}$ may be employed for many practical purposes. In cases, where it is necessary to increase the donor resistance, the InSb must undergo further purification and monocrystals must be produced. A part of the directors of the laboratory V. P. Zhuze and the Head Scientific Collaborator of the Scientific Research Institute Gipronikel' D. M. Shvart took part in this investigation. The latter concucted the spectral analysis of indium. There are 4 figures, 2 tables, and 13 references, 2 of which are Slavic.

ASSOCIATION: Institute for Semiconductors AN USSR, Leningrad (Institut poluprovodnikov AN SSSR Leningrad)

Card 3/4

SERGEYEVA, V. M.

AUTHORS: Zhuze, V. P., Sergeyeva, V. M., Shtrum, Ye. L. 57-2-3/32

TITLE: New Semiconducting Compounds (Novyye poluprovodnikovyye soyedineniya).

PERIODICAL: Zhurnal Tekhnicheskoy Fiziki, 1958, Vol. 28, Nr 2, pp. 233-236 (USSR).

ABSTRACT: In the investigation of binary semiconducting-compounds with the general stoichiometric formula ABX_2 the authors synthetically produced 4 new compounds of the following composition: $A^{I}B^{VIII}X_2^{VI}$, where A is either Cu or Ag, B - Fe and X either Se or Te. All four compounds, as was to be expected, are semiconductors. The analysis of the nature of the chemical linkage in these compounds indicates the possibility of a sp^3-hybridization (mixture of valence states) of the electron-states in the crystal. From the scheme given here is to be seen that the chemical linkage in compounds of this type probably takes place by means of electrons being in the state of sp^3-hybridization. $CuFeSe_2$, $CuFeTe_2$, $AgFeSe_2$ and $AgFeTe_2$ were produced by direct melting of the components as well as from corresponding binary compounds (which were previously produced by a direct synthesis of the components). The radiographic analysis (performed by R. A. Zvinchuk in the Laboratory for Radiography in the Institute for Semiconductors AS USSR) proved that the samples were monophase. The cast samples of $AgFeSe_2$

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and $AgFeTe_2$ were more closely examined. The photographs were taken in the case of $FeK_{\alpha,\beta}$-radiation. The roentgenograms were indicated under the assumption of a tetragonal lattice-symmetry. The great deviation of the c/a-values from the quantity (c/a=2) ideal for the chalcopyrite-structure as well as the occurrence of indices of the type h + k + l = 2n + l (forbidden for the space-group D_{2d}^{12} = I $\bar{4}$2d) excludes the possibility to ascribe to these compounds the type of the chalcopyrite-structure (to which the analogue of these compounds - $AgFeS_2$ belongs). The volume relation of the elementary cells in $AgFeSe_2$ and $AgFeTe_2$ (elementary cells) agrees with the relation of their molecular weights and the relation of the third power of the radii of Se^{2-} and Te^{2-}. This can only indicate a similarity of the chemical linkage and an exact agreement of the structures with the conceptions from the theory of the densest packing. The melting temperatures T_{melt}, the microstrength H in kg/mm^2, the electric conductivity in $ohm^{-1} \cdot cm^{-1}$, the Hall constant R in cm^3/C and the thermo-electromotive force α in $\mu V/^oC$ with regard to Pb for all compounds were determined. For several compounds the activation-energy of the current-carriers in eV was determined according to the dependence of the Hall constant on temperature. It is shown that the compounds (which were investigated here)

New Semiconducting Compounds.

like those of the $A^{III}_{B}{}^{V}$ - type in the case of a deviation of their composition from the stoichiometry do not change the type of conductivity. The electric properties of the $AgFeTe_2$-compound were more closely investigated here. In samples with a current-carrier-concentration of the order of magnitude 10^{18} cm^{-3} the mobility of the electrons is higher than 2000 $cm^2/V.sec$. The dilatometric analysis of $AgFeTe_2$ at 140-150°C shows an isothermal jump of the volume which indicates the occurrence of a first-order phase transition. The modification of the volume in the phase transition. The modification of the volume in the phase transition is very high and amounts to 0,55%. The activation-energy of the current-carriers also undergoes great changes at the point of transition. Until the transition-temperature ΔE = 0,28 eV, afterwards = 0,58 eV. At the author's request P. V. Gul'tyayev measured the course of temperature of the thermal conductivity in the $AgFeTe_2$- and $AgFeSe_2$-samples with large crystals.

The coefficient of thermal conductivity in both compounds at room temperature approaches 0,007 cal/cm.degree.sec.
There are 5 figures, 2 tables, and 9 references, 5 of which are Slavic.

ASSOCIATION: Institute for Semiconductors AS USSR. Leningrad (Institut poluprovodnikov AN SSSR. Leningrad).

57-2-3/32

New Semiconducting Compounds.

SUBMITTED: July 27, 1957.

AVAILABLE: Library of Congress.

1. Crystals-Analysis

Card 4/4

SOV/57-28-10-1/40

24(6)
AUTHORS: Zhuze, V. P., Sergeyeva, V. M., Shtrum, Ye. L.

TITLE: Semiconductor Compounds With the General Formula ABX_2 (Poluprovodnikovyye soyedineniya s obshchey formuloy ABX_2)

PERIODICAL: Zhurnal tekhnicheskoy fiziki, Vol 28, Nr 10, pp 2093-2108 (USSR), 1958

ABSTRACT: Ternary compounds with the general formula ABX_2 crystallize in a chalkopyrite structure. They were found for the first time synthetized by H. Hahn (Khan) and coworkers in 1953 (Ref 1). In ABX_2 compounds a formation of the sp^3 hybrid states and the tetrahedric distribution of atoms corresponding to this type of compound is according to the scheme describing the formation of chemical compounds only possible in such cases, where in the compound one of the elements of the third group of the periodic system, or iron, represents the trivalent element B. Antimony and bismuth are incapable of entering such a compound. Fundamental facts, a description of the method, and of the synthesis are presented. Investigations carried out in the X-ray laboratory IPAN by R. A. Zvinchuk showed that the samples of the

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group of $A^{I}B^{III}X_2^{VI}$ compounds are all of monophase composition and a chalkopyrite structure. The compounds $CuTlTe_2$, $AgTlSe_2$, and $AgTlTe_2$ were for the first time produced synthetically. The X-ray analysis showed that $A^{I}B^{VIII}X_2^{VI}$ compounds are also of monophase nature. Cast samples of $AgFeSe_2$ and $AgFeTe_2$ were examined more closely with the help of $FeK_{\alpha\beta}$ radiation. The $A^{I}B^{V}X_2^{VI}$ compounds: $CuSbSe_2$, $CuBiSe_2$, $AgSbSe_2$, $AgSbTe_2$, $AgBiSe_2$, and $AgBiTe_2$ also proved to be of a monophase nature. Without exception the compounds investigated were found to be semiconductors. In compounds with the elements of the V. group the chemical bond is very likely not realized by electrons in the hybrid state sp^3, but by electrons, the state of which can be expressed by a pure p-function. An octahedron near-range order of the atoms is characteristic of such a bond, as the p-bonds lie in three directions orthogonal to each other. The crystal structure of the compounds of the V. group confirms the fact that the tetrahedron distribution of atoms distinctive of sp^3

bonds is not found in these compounds. With this group only the octahedron distribution is realized. The compounds produced synthetically are subject to the general rules which make it possible to separate substances with intrinsic semiconduction from such with a metallic conductivity. The decision between these two alternatives is based upon the conception of the possibility of the formation of covalent bonds. The $A^{I}B^{III}X_2^{VI}$ compounds satisfy the octet rule by Kossel (Kossel') and the rule by Mooser (Mozer) and Pearson (Pirson) (Ref 19). Finally the participation of the d-electrons of the iron contained in the $A^{I}B^{VIII}X_2^{VI}$ compounds in the formation of the chemical bond and in the semiconductivity is investigated. The absence of metallic conductivity gives rise to the assumption that the d-electrons of the atoms of the transition metal are existing in discreet states in these compounds and that they form a completely occupied d-zone. It may be assumed that the great distances between the atoms of the transition metal in the crystal are hindering the formation of an incompletely occupied zone. This problem will be the subject of another paper. A. F. Ioffe,

Semiconductor Compounds With the General Formula ABX_2 SOV/57-28-9-1/40

Member. Academy of Sciences, USSR, showed constant interest in the work and discussed it with the authors. There are 12 figures, 7 tables, and 20 references, 10 of which are Soviet.

SUBMITTED: March 10, 1958

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(5)

ZHUZE, V. P., ZASLAVSKIY, A. I., PETRUSEVICH, V. A., SERGEYEVA, V. M., SMIRNOV, I. A. and SHELYAH, A. I.

Electrical and Thermal Properties on In Te - Semiconductor with Defect Structure.

report presented at the IIIrd. Conf on Semiconductor Physics, Prague, 29 Aug - 2 Sep 1960

Inst. of Semiconductors, Acad. Sci. USSR Leningrad

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S/181/60/002/02/25/033
B006/B067

AUTHORS: Averkin, A. A., Sergeyeva, V. M., Shelykh, A. I.

TITLE: Influence of Uniform Pressure on the Electrical Conductivity and Thermoelectromotive Force of In_2Te_3

PERIODICAL: Fizika tverdogo tela, 1960, Vol. 2, No. 2, pp. 347-349

TEXT: Among the sphalerite-like crystallizing semiconducting compounds there are some of the composition $A_2^{III}B_3^{VI}$ which have defects at the sites of the metal atoms. In_2Te_3, which has been investigated by the authors, also belongs to them. The investigations of the authors yielded the surprising result that in the isoelectronic series of semiconductors which crystallize sphalerite-like and have almost equal lattice parameters, the properties of In_2Te_3 deviate essentially from those of the right and left neighbors, and that they are governed by completely different rules. Hence, e.g., the carrier mobility in In_2Te_3 is anomalously small

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Influence of Uniform Pressure on the Electrical Conductivity and Thermoelectromotive Force of In_2Te_3

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(10-45 $cm^2/v.sec$ for electrons) as well as the thermal conductivity of the lattice. According to Ye. D. Devyatkova and I. A. Smirnov, it amounts to 0.002 cal/cm.sec.deg at 20°C. The authors investigated the influence exercised by the strong defectiveness of the lattice on the change of the electrical properties with uniform pressure (7000 kg/cm^2) in the temperature range 20-60°C. The In_2Te_3 samples had a size of 7 · 3 · 2 mm^3, the electric contacts were made of pure tin. The temperature in the pressure chamber was kept constant by means of an ultrathermostat (accuracy: 0.2°C). Paraffin was chosen as pressure transmitting medium. As may be seen from Fig. 1, the electrical conductivity of an intrinsic In_2Te_3 sample decreases with increasing pressure, passes through a minimum $P_{\sigma min}$, and increases again with further increasing pressure. $P_{\sigma min}$ somewhat differs in the various samples, and with increasing temperature it is shifted toward higher pressures. The $\sigma(P)$ curve shows a hysteresis which is particularly marked in samples with impurity conductivity

Influence of Uniform Pressure on the Electrical Conductivity and Thermoelectromotive Force of In_2Te_3

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(Fig. 2). A measurement of the coefficient of thermoelectromotive force α showed that in the pressure range $1 \div P_{\sigma min}$ the thermoelectromotive force is negative (n-type conductivity) and decreases with increasing P; at $P_{\sigma min}$ it is equal to zero, and with further increasing pressure it becomes positive (p-type conductivity). The p-type conductivity of samples with impurity conductivity is roughly trebled with increasing pressure in the range 1-7000 kg/cm^2, whereas the n-type conductivity hardly changes (Fig. 2). Emf measurements showed that in n-type and p-type samples $|\alpha|$ is independent of P within the limits of accuracy. In conclusion, the authors try to explain these experimental results theoretically. They thank V. P. Zhuze and A. R. Regel' for supervising the work. There are 2 figures and 2 non-Soviet references.

ASSOCIATION: Institut poluprovodnikov AN SSSR Leningrad (Institute of Semiconductors of the AS USSR, Leningrad)

SUBMITTED: May 21, 1959

Card 3/3

ZHUZE, V.P.; SERGEYEVA, V.M.; SHELYKH, A.I.

Electric properties of an In_2Te_3 semiconductor with defect structure. Fiz. tver. tela 2 no.11:2858-2871 N '60. (MIRA 13:12)

1. Institut poluprovodnikov AN SSSR, Leningrad.
(Indium telluride--Electric properties)

ZASLAVSKIY, A.I.; SERGEYEVA, V.M.

Polymorphism of In_2Te_3. Fiz. tver. tela 2 no.11:2872-2880 N '60. (MIRA 13:12)

1. Institut poluprovodnikov AN SSSR, Leningrad.
(Indium telluride) (Polymorphism)

PETRUSEVICH, V.A.; SERGEYEVA, V.M.

Optical and electrical properties of In_2Te_3. Fiz. tver. tela 2 no.11:2881-2884 N '60. (MIRA 13:12)

1. Institut poluprovodnikov AN SSSR, Leningrad.
(Indium telluride)

ZASLAVSKIY, A.I.; SERGEYEVA, V.M.; SMIRNOV, I.A.

Heat conductivity of α and β-modifications of In_2Te_3. Fiz. tver. tela 2 no.11:2885-2893 N '60. (MIRA 13:12)

1. Institut poluprovodnikov AN SSSR, Leningrad.
(Indium telluride--Thermal properties)

PETRUSEVICH, V.A.; SERGEYEVA, V.M.; SMIRNOV, I.A.

Relationship between the thermal and optical properties of In_2Te_3.
Fiz. tver. tela 2 no.11:2894-2898 N '60. (MIRA 13:12)

1. Institut poluprovodnikov AN SSSR, Leningrad.
(Indium telluride)

Semiconducting properties of nicklous oxide. V. P. Zhuze, A. I. Shelykh.

Mobility of current carriers in ferro-and antiferro-magnetic material Ya. M. Ksendzov.

Electrical properties of chalcogenides of rare earth elements. A. V. Golubkov, Ye. V. Goncharova, V. P. Zhuze, V. M. Sergeyeva.

Report presented at the 3rd National Conference on Semiconductor Compounds, Kishinev, 16-21 Sept 1963

ACCESSION NR: AP4011764 S/0181/64/006/001/0257/0267

AUTHORS: Zhuze, V. P.; Golubkov, A. V.; Goncharova, Ye. V.; Sergeyeva, V. M.

TITLE: Electrical properties of rare earth compounds (cerium subgroup) with members of the sulfur group

SOURCE: Fizika tverdogo tela, v. 6, no. 1, 1964, 257-267

TOPIC TAGS: electrical properties, rare earth, cerium subgroup, sulfur group, resistivity, thermal conductivity, thermoelectromotive force, LaS, CeS, PrS, NdS, LaSe, CeSe, PrSe, NdSe, LaTe, CeTe, PrTe, NdTe

ABSTRACT: The authors have synthesized the compounds LaS, CeS, PrS, NdS, LaSe, CeSe, PrSe, NdSe, LaTe, CeTe, PrTe, and NdTe. They determined the dependence of resistivity and thermoelectromotive force on temperature in the interval 300-1300K, and they measured the thermal conductivity at room temperature. The resistivity increases moderately but steadily with increase in temperature for each compound. The thermoelectromotive force declines with rise in temperature, as shown in Fig. 1 on the Enclosures. Many of the properties of the compounds are

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ACCESSION NR: AP4011764

summarized in Table 1 on the Enclosures. The results of measurements indicate that the investigated compounds have the nature of metallic conductors. "We take this opportunity to express our sincere thanks to our co-workers at the x-ray laboratory of IPAN, I. A. Zaslavskiy and T. B. Zhukova for x-ray analyses of the samples and also to the co-workers at our laboratory, M. A. Demina dnd T. I. Komarova for aid in preparing the samples." Orig. art. has: 6 figures, 4 tables, and 6 formulas.

ASSOCIATION: Institut poluprovodnikov AN SSSR, Leningrad (Institute of Semiconductors AN SSSR)

SUBMITTED: 30Jul63 DATE ACQ: 14Feb64 ENCL: 02

SUB CODE: PH NO REF SOV: 003 OTHER: 025

Card 2/4

ZHUZE, V.P.; GOLUBKOV, A.V.; TONCHAROVA, Ye.V.; KOMAROVA, T.I.; SERGEYEVA, V.M.

Electric properties of samarium sulfide. Fiz. tver. tela 6 no.1: 268-271 Ja '64. (MIRA 17:2)

1. Institut poluprovodnikov AN SSSR, Leningrad.

ACCESSION NR: AP4013500 S/0181/64/006/002/0430/0435

AUTHORS: Devyatkova, Ye. D.; Zhuze, V. P.; Golubkov, A. V.; Sergeyeva, V. M.; Smirnov, I. A.

TITLE: The thermal conductivity of Sm, P, and their simple chalcogen compounds

SOURCE: Fizika tverdogo tela, v. 6, no. 2, 1964, 430-435

TOPIC TAGS: thermal conductivity, samarium, praseodymium, chalcogen, crystal lattice conductivity, rare earth

ABSTRACT: This paper stems from a lack of thermal-conductivity information on rare-earth compounds and their compounds that have been recently studied in considerable detail for other properties. The compounds studied (PrS, PrSe, PrTe, and SmS) were synthesized from the constituent elements by the method described in Rare Earth Research (p. 135, 223, Ed. by E. V. Kleber, N. Y., 1961), and the thermal conductivity was measured on the "A" setup of Ye. D. Devyatkova, A. V. Petrov, I. A. Smirnov, and B. Ya. Moyzhes (FTT, 2, 738, 1960). Measurements on Sm, Pr, and the indicated compounds were made in the temperature interval 80-460K.

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ACCESSION NR: AP4013500

The authors found that a considerable part of the total thermal conductivity (up to 30-50%) in these substances is crystal-lattice conductivity. The temperature dependence of this lattice conductivity may be explained by two scattering processes: phonons by phonons and phonons by electrons. Orig. art. has: 6 figures, 2 tables, and 5 formulas.

ASSOCIATION: Institut poluprovodnikov AN SSSR, Leningrad (Institute of Semiconductors AN SSSR)

SUBMITTED: 30Jul63	DATE ACQ: 03Mar64	ENCL: 00
SUB CODE: IC, SS	NO REF SOV: 004	OTHER: 009

Card 2/2

BOGOMOLOV, B.N.; SERGEYEVA, V.M.

Unfired refractories with a polymer binding. Ogneupory 29 no.11:520-523 '64. (MIRA 18:1)

1. Sibniitsement.

L 17613-66 EWT(m)/EWP(e)/ETC(f)/EWG(m)/EWP(t) IJP(c) RDW/JD/WH

ACC NR: AP6003366 SOURCE CODE: UR/0363/66/002/001/0077/0081

AUTHOR: Golubkov, A. V.; Zhukova, T. B.; Sergeyeva, V. M. 36 B

ORG: Institute of Semiconductors, AN SSSR (Institut poluprovodnikov AN SSSR)

TITLE: Synthesis of the rare earth element chalcogenides 15,44 27

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 2, no. 1, 1966, 77-81

TOPIC TAGS: rare earth metal, selenide, sulfide, telluride, inorganic synthesis, rare earth chalcogenide, single crystal growth, semiconducting material

ABSTRACT: An improved method of direct synthesis has been developed for higher purity poly- and single crystalline rare earth metal monochalcogenides, MX, and sesquichalcogenides, M_2X_3, where M = La, Pr, Nd, Ce and X = S, Se, Te. The nonstoichiometric and low purity compounds were obtained by the earlier used methods, mainly because of oxidation or contamination with the impurities from the container. A two-step process developed by the authors excluded these two causes of contamination. The first step of the process consisted in reacting the rare earth metal shavings with chalcogen vapors at below 600C in

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L 17613-66

ACC NR: AP6003366 O

evacuated and hydrogen filled ampuls of thermally stable glass. In the second step, the reaction product was either annealed by resistance heating at 1600—1800C in high vacuum to prepare macrocrystalline MX, or annealed and melted by induction heating at 1500—2000C also in high vacuum to grow by sublimation well developed MX single crystals, e.g., LaS. Water cooling of the container (quartz ampul) was required in this latter variant to prevent oxidation of MX. Preparation of polycrystalline M_2X_3 ingots also required high temperature annealing and melting in an induction furnace, but in argon atmosphere and without cooling of the ampul. Lattice constants a of the polycrystalline MX were in good agreement with literature data. In the case of LaS, PrSe, and PrTe single crystals the a values were determined with greater accuracy and were in good agreement with the a values of polycrystalline compounds. Electric conductivity data at 300K for MX were much higher than literature data because of the higher purity of the products. Electric resistivity of M_2X_3 in the 10^4—10^5 ohm·cm range indicated a nearly stoichiometric composition. Orig. art. has: 2 figures and 1 table. [JK]

SUB CODE: 07/ SUBM DATE: 25Jun65/ ORIG REF: 004/ OTH REF: 013
ATD PRESS: 4210

Card 2/2

L 24373-66 EWT(m)/ETC(f)/EWG(m)/EWP(t) RDW/JD/JG

ACC NR: AP6010438 SOURCE CODE: UR/0386/66/003/005/0217/0219

AUTHOR: Zhuze, V. P.; Shalyt, S. S.; Noskin, V. A.; Sergeyeva, V. M.

ORG: Institute of Semiconductors, Academy of Sciences, SSSR (Institut poluprovodnikov Akademii nauk SSSR)

TITLE: Superconductivity of La_3Te_4

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu. Prilozheniye, v. 3, no. 5, 1966, 217-219

TOPIC TAGS: superconductivity, lanthanum compound, telluride, stoichiometry, critical point, critical magnetic field

ABSTRACT: The authors show that La_3Te_4 is a superconductor of the second kind, with properties similar to the La_3Se_4 and La_3S_4, whose superconductivity was reported recently. They also show that the superconducting transition temperature of this substance depends on the technology of its preparation and is possibly connected with some deviation of the composition from the stoichiometry. The lanthanum telluride was synthesized from the components by vacuum sublimation and zone melting, using a procedure described in detail elsewhere (A. V. Golubkov et al., Neorganicheskiye materialy [Inorganic Materials] v. 2, No. 1, 1966). Two samples were tested, one pressed from previously fused material and the other prepared by melting. The critical temperatures of the two samples were 2.45 and 3.75K, respectively. The corresponding critical fields for the destruction of superconductivity were 8 and 12.5 koe, respectively. Magnetic measurements have shown that at 1.4K the Meissner effect

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L 24373-66

ACC NR: AP6010438 2

manifested itself in fields up to 20 and 60 oe in samples 1 and 2, respectively.
The authors thank A. I. Zaslavskiy and T. B. Zhukova for the x-ray phase analysis.
Orig. art. has: 3 figures.

SUB CODE: 20/ SUBM DATE: 22Jan66/ ORIG REF: 001/ OTH REF: 002

Card 2/2 FV

L 41501-66 EWT(m)/EWP(w)/T/EWP(t)/ETI IJP(c) RDW/JD/JG

ACC NR: AP6018537 SOURCE CODE: UR/0181/66/008/006/1761/1771

AUTHOR: Golubkov, A. V; Devyatkova, Ye. D.; Zhuze, V. P.; Sergeyeva, V. M.; Smirnov, I. A.

ORG: Institute of Semiconductors, AN SSSR, Leningrad (Institut poluprovodnikov AN SSSR)

TITLE: Thermal conductivity of lanthanum and its monochalcogenites

SOURCE: Fizika tverdogo tela, v. 8, no. 6, 1966, 1761-1771

TOPIC TAGS: lanthanum, lanthanum compound, thermal conduction, rare earth metal, crystal lattice, thermal emf, temperature dependence, phonon scattering, electron scattering

ABSTRACT: This is a continuation of earlier research by the authors (FTT v. 6, 430, 1964) on the thermal conductivity of rare-earth metals and their compounds, and is devoted to a separation of the electronic and lattice components of the thermal conductivity of La, LaTe, LaSe, and LaS. The lanthanum monochalcogenites were synthesized from the constitutent elements by a method described in detail in the literature (Rare Earth Research, 223. Ed. by E. V. Kleber, NY, 1961; A. V. Golubkov et al., Neorg. mat. v. 2, 77, 1966) and were pressed into briquettes at high pressure followed by annealing. The measurement apparatus was described by the authors earlier (FTT v. 2, 738, 1960). The theoretical expressions for the two thermal-conductivity components are derived. From an analysis of the experimentally measured

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L 41591-66

ACC NR: AP6018537

thermal conductivity, resistivity, and thermal emf and their temperature dependence it is deduced that an appreciable fraction of the total thermal conductivity is due to the crystal lattice. The temperature dependence of the lattice component can be attributed to the presence of two scattering mechanisms, phonons by phonons and phonons by conduction electrons. The low carrier mobility observed in the experiments is due essentially to strong electron-phonon interaction. The presently available data on LaTe, LaSe, and LaS are summarized in a table. The authors thank A. I. Zaslavskiy and T. B. Zhukova for the x-ray analysis, V. M. Muzhdaba and Ye. V. Goncharova for supplying data on the residual resistance and on the concentration, and Doctor Suchat for information on the degree of ionicity of the materials measured in this study. Orig. art. has: 7 figures, 7 formulas, and 5 tables.

SUB CODE: 20/ SUBM DATE: 03Nov65/ ORIG REF: 010/ OTH REF: 022

Card 2/2

SERGEYEVA, V.N., dotsent

Surgical treatment of genitourinary fistulas in women. Zdrav. Turk. 5 no.2:21-25 Mr-Ap '61. (MIRA 14:5)

1. Iz kafedry fakul'tetskoy khirurgii (zav. - dotsent Ch.B.Bayriyev) Turkmenskogo gosudarstvennogo meditsinskogo instituta imeni I.V.Stalina. (FISTULA)

[illegible], [illegible]

[illegible], [illegible] "The principal pests of the spindle tree", Sbornik rabot (Dal'nevost. nauch.-issled. In-t Les. Khoz-a i lesoekspluatatsii), Issue 1, 1948, p. 14[illegible]-42.

SO: U-43[illegible]3, 1[illegible] August 53, (Letopis 'Zhurnal 'nykh Statey', No. 22, 1949).

SERGEEVA, V. N.

27666. SERGEEVA, V. N. i ODINTSOV, P. N.--k voprosu o lignine zhivykh chastey racteniya. trudy in-ta lesokhoz. Problem (akad. nauk latv. SSR), vyp. 1, 1949, s. 181-86. rezyume na latv. yaz. - Bibliogr: 6 nazv. SINSKAYA, E. W. k peresmotru osnov filogeneticheskoy sistematike. - sm. 27808.

SO: Knizhnaya Letopis, Vol. 1, 1955.

KALNIN'S, A.I.; SERGEEVA, T.N.

Esterification of spruce rosin. Latvijas PSR Zinatnu Akad. Vestis '49, No.2, 23-9. (MLRA 4:1)
(CA 47 no.15:7792 '53)

SERGEYEVA, V. H.

Kalnin'sh, A., Sergeyeva, V. H. and Vende, P. "On the problem of making rational use of spruce resin," Izvestiya Akad. nauk Latv. SSR, 1949, No. 3, p. 85-89, (In Latvian; resume in Russian).

So: U-3736, 21 May 53, (Letopis 'Zhurnal 'nykh Statey, No. 17, 1949).

SERGEYEVA, V.N.

USSR.

Thermal decomposition of alkali lignin. V. N. Sergeeva and L. N. Mozheiko. *Voprosy Lesokhim. i Khim. Drevesiny, Trudy Inst. Lesokhoz. Problem, Akad. Nauk Latv. S.S.R.* 6, 29–37(1953)(in Russian); cf. Freudenberg and Adam, *C.A.* 35, 5099⁹.—Alkali lignin (I), obtained in 18% yield from spruce sawdust by cooking 6 hrs. at 170° with 5% NaOH followed by 20% H_2SO_4 pptn., is more resistant to high temp. than is acid lignin. The residue, after pyrolysis of I in H or by ordinary dry distn., contained about 80% of phenols and compds. with CHO and C:O groups. Decompn. of I during pyrolysis in H is ascribed to cleavages occurring at some of the ether linkages in I; in dry distn. they occur at linkages between C and O and are followed by oxidation of mol. fragments.

Elisabeth Barabash

SERGEYEVA, V. N.

USSR.

Thermal decomposition of xylan in a current of hydrogen. V. N. Sergeeva, B. G. Pavare, and G. E. Domburg. *Voprosy Lesokhim. i Khim. Drevesiny, Trudy Inst. Lesokhoz. Problem Akad. Nauk Latv. S.S.R.* 6, 38-50(1953)(in Russian); cf. Husemann, *C.A.* 34, 6580⁸.—Thermal decompn. of pentosans in H was studied with xylan. This pyrolysis was more complete than that obtained by dry distn.; ⅓ of original xylan decompd. at 135–225°; all of xylan decompd. at 400°. The following was the optimum condition for pyrolysis: heating xylan to 325–50°, at which temp. valuable aromatic derivs. are obtained. Presumably pyrolysis proceeds by (1) hydrogenation of xylan at glucosidic linkages; (2) hydrogenation of individual pentoses at glycol groupings; (3) condensation of low-mol. compds. to polymethylenes and aromatic compds. At higher temps. phenolic compds. are hydrogenated. Elisabeth Barabash

SERGEYEVA, V.

Characteristics of pine tar obtained by mixing of the dry distillation gases with a fan. A. Kalniņš, V. Sergejeva, and S. Biseniece. *Latvijas PSR Zinātņu Akad. Vēstis* 1953, No. 8, 75–9(Russian summary, 80).—In dry distn. of pine wood, mixing of the distn. gases with a fan increased the yield of both free and combined phenols (I). The light tar contained 46%, the heavy tar 41% I. The tars contained 7–11% acids, 11–12% esters, 0.3–1.5% ethers, and practically no retene. Mol. wt. of the neutral part was 230–40. A. D.

SERGEYEVA, V.N.

USSR

Thermographic study of pyrolysis of wood and its constituents. V. N. Sergeeva and A. Vnivads. (Acad. Sci. Latv. S.S.R. Riga). *Latvijas PSR Zinātņu Akad. Vēstis* 1954, No. 9 (Whole No. 86), 103–8 (in Russian).—Comparison of thermal differential analysis curves of birchwood (I), and cellulose (II), holocellulose (III), lignin (IV), xylan (V), and xylose (VI) isolated from I, indicate that in pyrolysis of I considerable interaction takes place between the components of I. Exothermic decompn. starts at 259°, with 3 indistinct max. at 389°, 414°, and 452°. V exhibits an exothermic reaction at 273°, endothermic reaction at 331°, and new exothermic and endothermic reactions above 390°. III shows combined characteristics of I and V, with a shift in temp. Comparison of V and VI indicates that in the decompn. of V, VI is not formed. Pyrolysis of VI proceeds by mechanism different from that of glucose. Andrew Dravnieks

KALNINS, A.I.; SERGEYEVA, V.N., kandidat khimicheskikh nauk.

"Technology of pyrogenic processing of wood." V.N.Kozlov, A.A.Nimvitskii. Reviewed by A.I.Kalnins, V.N.Sergeyeva. Gidroliz. i lesokhim. prom. 8 no.6:29-30 '55. (MLRA 9:1)

1.Deystvitel'nyy chlen Akademii nauk Latviyskoy SSR (for Kalnins).
(Wood--Chemistry) (Kozlov, V.N.) (Nimviyskii, A.A.)

SERGEYEVA, V.N.

3

Röntgenographic investigation of thermally treated wood cellulose and holocellulose. V. N. Sergeeva, A. Levins, and E. Jansons. *Latvijas PSR Zinātņu Akad. Vestis* 1956, No. 2, 81–9(in Russian; Latvian summary, 85–6).—X-ray patterns of wood cellulose (I) and holocellulose (II) were identical, with differences only in the degree of orientation. It is concluded that in birch II, the x-ray pattern is produced only by I component. Thermal treatment of birch at 105–234° did not change the pattern. Treatment at 260° slightly increased the degree of orientation. At 300°, the texture of I and II in birch and cotton disappeared.

A. Dravnieks

SERGEYEVA, V.N.; MILYUTINA, S.V.

Changes in the morphology and properties of the cell walls of holocellulose and cellulose fibers of spruce brought about by thermal processing. Gidroliz. i lesokhim. prom. 11 no.3:3-5 '58. (MIRA 11:5)

1. Institut lesokhozyaystvennykh problem AN Latviyskoy SSR.
(Spruce) (Holocellulose) (Cellulose)

SERGEEVA, V. ; MILIUTINA, S.

Effect of heat treatment on the nature of holocellulose fibers of spruce wood. p. 69.

BIOLOGICHESKAIA NAUKA; SELSKOMU I LESNOMU KHOZIAISTVU. (Latvijas PSR Zinatnu akademija. Biologijas Zinatnu nodala) Riga, Latvia, No. 16, 1958. In Russian.

Monthly List of East European Accessions (EEAI), LC, Vol. 8, No. 8, August 1959.
Uncla.

GOLOVA, O.P.; EPSHTEYN, Ya.V.; SERGEYEVA, V.N.; KALNIN'SH, A.I. [Kalnins, A.]; ODINTSOV, P.N.; MAKSIMENKO, N.S.; PANASYUK, V.G.; Prinimali uchastiye: MERLIS, N.M.; DURININA, L.I.; BISENIYETSE, S.K.[Biseniece, S.]; GUNDARS, A.Yu.; FEDORCHENKO, R.I.; MINAKOVA, V.I.

New method for the complete chemical processing of plant tissues. Gidroliz. i lesokhim. prom. 14 no.7:4-8 '61. (MIRA 14:11)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR (for Golova, Epshteyn, Merlis, Durinina). 2. Institut lesokhozyaystvennykh problem i khimii drevesiny AN Latviyskoy SSR (for Sergeyeva, Kalnin'sh, Odintsov, Bisenietse, Gundars). 3. Krasnodarskiy gidroliznyy zavod (for Maksimenko, Fedorchenko, Minakova). 4. Dnepropetrovskiy sel'skokhozyaystvennyy institut (for Panasyuk).

(Plant cells and tissues)
(Botanical chemistry)

SERGEYEVA, Varvara Nikolayevna; DOMBURG, Galina Eduardovna; KALNIN'SH, A.I.[Kalnins, A.I.], akademik, red.; DYMARSKAYA,O., red.; LEMBERGA, A., tekhn, red.

[Formation of furfurole and methods for its production]Obrazovanie furfurola i metody ego polucheniia. Pod red. A.I.Kalnin'sha. Riga, Izd-vo Akad. nauk Latviiskoi SSR, 1962. 83 p. (MIRA 15:9)

1. Akademiya nauk Latviyskoy SSR (for Kalnin'sh).
(Furaldehyde)

GOLOVA, O.P.; EPSHTEYN, Ya.V.; SERGEYEVA, V.N.; KALNIN'SH, A.I. [Kalnins, A.]; ODINTSOV, P.N.; MAKSIMENKO, N.S.; PANASYUK, V.G.

Outlook for a new method of complete processing of plant materials. Gidroliz.i lesokhim.prom. 15 no.3:12-15 '62. (MIRA 15:5)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR (for Golova, Epshteyn). 2. Institut lesokhozyaystvennykh problem i khimii drevesiny AN Latviyskoy SSR (for Sergeyeva, Kalnin'sh, Odintsov). 3. Krasnodarskiy gidrolizuyy zavod (for Maksimenko). 4. Dnepropetrovskiy sel'skokhozyaystvennyy institut (for Panasyuk).
(Wood—Chemistry) (Hydrolysis) (Plant cells and tissues)

SERGEYEVA, Varvara Nikolayevna; MOZEIKO, L.; JAUNZEMS, V.; FELDHUNE, A., red.; BOKMANIS, R., tekhn. red.

[Lignin and its use] Lignins un ta izmantosana. Riga, Latvijas PSR ZA izdevnieciba, 1963. 63 p. (MIRA 16:5)
(Lignin)

GROMOV, V.S., kand. khim. nauk, otv. red.; DOMBURG, G.E., kand. khim. nauk, red.; IYEVIN'SH, I.K.[Ievins, I.], kand. tekhn. nauk, red.; KAL'NINA, V.K.[Kalnina, V.], kand. tekhn. nauk, red.; RUPAYS, Ye.A.[Rupais, E.], kand. khim. nauk, red.; SERGEYEVA, V.N., doktor khim. nauk, red.; ERMUSH, N.A.[Ermus, N.], st. nauchn. sotr., red.; YUKNA, A.D.[Jukna, A.], kand. tekhn. nauk, red.; LEVI,S., red.; SHKLENNIK, Ch., red.

[Chemical processing and preserving of wood] Khimicheskaia pererabotka i zashchita drevesiny. Riga, Izd-vo AN Latv.SSR, 1964. 238 p. (MIRA 18:1)

1. Latvijas Padomju Socialistiskas Republikas Zinatnu Akademija. 2. Institut khimii drevesiny AN Latviyskoy SSR (for Gromov, Sergeyeva, Ermush).

SKLYAR, V.A.; AVRAMENKO, K.P.; PAVLOV, D.F.; BOBKOV, N.V.; BERESTOVAYA, R.V.; SKRYPNIK, Ye.P.; SEMONENKO, Ye.T.; SERGEYEVA, V.P.; KOLYAKO, D.A., red.; SOLDATOVA, N.P., otvetstv.za vypusk; GRISHNYAYEV, B.G., tekhn.red.

[Economy of Krasnodar Territory; a statistical manual] Narodnoe khoziaistvo Krasnodarskogo kraia; statisticheskii sbornik. Krasnodar, Gosstatizdat, 1958. 233 p. (MIRA 12:2)

1. Krasnodarskiy kray. Statisticheskoye upravleniye. 2. Nachal'nik Krasnodarskogo krayevogo statisticheskogo upravleniya (for Kolyako). (Krasnodar Territory--Statistics)

VOL'NOV, I.I.; CHAMOVA, V.N.; SERGEYEVA, V.P.; LATYSHEVA, Ye.I.

Research in the synthesis of superoxides of alkaline earth metals.
Zhur.neorg.khim. 1 no.9:1937-1942 S '56. (MLRA 10:1)

1. Institut obshchey i neorganicheskoy khimii imeni N.S.Kurnakova Akademii nauk SSSR, Laboratoriya perekisnykh soyedineniy.
(Calcium superoxide)

CHAMOVA, V.N.; SERGEYEVA, V.P.

The solubility isotherm of the system $Ca(OH)_2$ -- H_2O_2 -- H_2O at 50°. Zhur. neorg. khim. 2 no.8:1938-1939 Ag '57. (MIRA 11:3)

1. Institut obshchey i neorganicheskoy khimii im. N.S. Kurnakova AN SSSR, Laboratoriya perekisnykh soyedineniy.
(Calcium hydroxide) (Hydrogen peroxide) (Solubility)

5(2) SOV/78-4-2-2/40

AUTHORS: Vol'nov, I. I., Chamova, V. N., Sergeyeva, V. P.

TITLE: New Data on the Formation of Superperoxides of Calcium and Strontium (Novyye dannyye po obrazovaniyu nadperekisey kal'tsiya i strontsiya)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 2, pp 253-256 (USSR)

ABSTRACT: The optimum conditions for the production of $Ca(O_2)_2$ and $Sr(O_2)_2$ from $CaO_2 \cdot 2H_2O_2$ and $SrO_2 \cdot 2H_2O_2$ were determined. The percentage of the $Ca(O_2)_2$ and $Sr(O_2)_2$ content in the decomposition products of $CaO_2 \cdot 2H_2O_2$ and $SrO_2 \cdot 2H_2O_2$ depends on the temperature, time and surface area. A temperature of 50°C, a duration of 100 minutes, a surface area of 1800 cm^2, and a pressure of 10 mm Hg are recommended for the production of $Ca(O_2)_2$ and $Sr(O_2)_2$. One gram initial sample of $MeO_2 \cdot 2H_2O_2$ is distributed on the surface of 1800 cm^2. On the decomposition of $CaO_2 \cdot 2H_2O_2$ the analyses of the solid phases formed show

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that with an increase of the percentage of $Ca(O_2)_2$ content the $Ca(OH)_2$ content rises and the CaO_2 content drops. This dependence is caused by the occurrence of a secondary reaction between $Ca(O_2)_2$ and steam, or by the participation of hydroxyl radicals in the reaction. The transformation of $CaO_2 \cdot 2H_2O_2$ into $Ca(O_2)_2$ mixed with solid siccatives (silica-gel, P_2O_5, anhydrous CaO_2, alkali hydroxides) or liquid rectifiers (absolute ethyl alcohol, CCl_4, dioxane, diethyl phthalate) was investigated. The $Ca(O_2)_2$ content of the solid products is 40 weight %. On drying in a vacuum KO_2 and NaO_2 - containing products are formed from a mixture of $CaO_2 \cdot 2H_2O_2$ and KOH or NaOH. Samples with 40 weight % $Ca(O_2)_2$ can be stored in hermetically closed vessels. With an extension of the surface area, on which the preparations are distributed, the $Ca(O_2)_2$ and $Sr(O_2)_2$ content of the reaction products in-

creases. There are 3 figures, 3 tables, and 4 Soviet references.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N. S. Kurnakova Akademii nauk SSSR (Institute of General and Inorganic Chemistry imeni N. S. Kurnakov of the Academy of Sciences, USSR)

SUBMITTED: November 3, 1957

BUZILOV, Yu.T., kand. ekon. nauk; Prinimali uchastiye: YERMAKOVA, L.A.; RESHETNIKOV, V.A.; RESHETNIKOVA, L.V.; RUBLEVA, K.I.; SAMOYLOV, N.P.; SERGEYEVA, V.S., red.; TIKHONOVA, Ye.M., red.

[Manual for establishing work norms and wages in livestock farming] Spravochnik po normirovaniiu i oplate truda v zhivotnovodstve. Moskva, Kolos, 1964. 326 p.
(MIRA 18:8)

PATRICH, Aleksey Trofimovich; KORNATOV, Il'ya Dmitriyevich; SERGEYEVA, V.S., red.

[Business accounting practice within individual production units of a collective farm] Praktika vnutrikolkhoznogo khozrascheta. Moskva, Kolos, 1965. 189 p. (MIRA 18:9)

MORSIN, Sergey Sergeyevich; SERGEYEVA, V.S., red.; LAPIDUS, M.A., red.; TRUKHINA, O.N., tekhn. red.

[Organization of work on collective farms]Organizatsiia truda v kolkhozakh. Moskva, Sel'khozizdat, 1962. 85 p. (MIRA 16:2)

(Collective farms--Management)

BUZILOV, Yuriy Tarasovich, dots.; SERGEYEVA, V.S., red.; BALLOD, A.I., tekhn. red.; SOKOLOVA, N.N., tekhn.red.; BELOVA, N.N., tekhn.red.

[Establishing standards of production in agriculture] Tekhnicheskoe normirovanie v sel'skom khoziaistve. Moskva, Sel'khozizdat, 19621 287 p. (MIRA 16:5)
(Agriculture)

KALPIN, G.Z.; RUBLEVA, K.I.; SAMOYLOV, N.P.; REBROVA, G.I.; SAGARDA, Ye.A.; SERGEYEVA, V.S., red.; TIKHONOVA, Ye.M., red.; MAKHOVA, N.N., tekhn. red.; OKOLELOVA, Z.P., tekhn. red.

[Manual on wages on state farms and other state agricultural enterprises] Spravochnik po oplate truda v sovkhozakh i drugikh gosudarstvennykh sel'skokhozyaystvennykh predpriiatiiakh. Izd.2., perer. i dop. Moskva, Sel'khozizdat, 1963. 638 p. (MIRA 16:12)
(Agricultural wages--Handbooks, manuals, etc.)

LARIONOV, Georgiy Ivanovich; SERGEYEVA, V.S., red.; SOKOLOVA, N.N., tekhn. red.; OKOLELOVA, Z.P., tekhn. red.

[Establishing work norms on collective and state farms] Normirovanie truda v kolkhozakh i sovkhozakh. Moskva, Sel'khozizdat, 1963. 230 p. (MIRA 17:2)

S..., ..., ...; SERGEYEVA, ...

...ing the regime of ground water of the Kamenko irrigation massif according to the regime of Kakhovka Reservoir. Trudy ...GINGEO no.10:89-99 '64. (MIRA 17:10)

... Nauchno-issledovatel'skiy institut geologii Dnepropetrovskogo gosudarstvennogo universiteta.

TSYPKINA, M.N.; MAKHNOVETSKAYA, G.I.; SERGEYEVA, V.V.

"Acitve" and "inactive" sulfur of cation exchangers. Zhur.prikl.khim. 35 no.11:2440-2444 N '62. (MIRA 15:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut tsellyuloznoy i bumazhnoy promyshlennosti.
(Sulfur) (Ion exchange resins)

L 7885-66 EWT(m)/ETC/EWG(m) DS/RM

ACC NR: AP5025040 SOURCE CODE: UR/0286/65/000/016/0085/0085

AUTHORS: Eliashberg, M. G.; Tsypkina, M. N.; Makhnovetskaya, G. I.; Boyarskaya, R. K.; Sergeyeva, V. V.

ORG: none

TITLE: Method for obtaining cation exchange resin from waste solutions of the sulfite cellulose industry. Class 39, No. 173952

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 16, 1965, 85

TOPIC TAGS: cation exchange, resin, sulfite waste liquor, cellulose

ABSTRACT: This Author Certificate presents a method for obtaining cation exchange resin from waste liquor of the sulfite cellulose industry (alcoholic sulfite, malt, and yeast brew). To reduce the cost of manufacture, the waste malt solutions are freed from the base by cationation and concentrated by evaporation at a temperature of 90-100C until the dry materials content reaches 50%. The mixture is heated to dryness and condensed at the same temperature until the resin gains the desired degree of swelling.

SUB CODE: 07, 11/ SUBM DATE: 01Mar61

Card 1/1 UDC: 541.183.123.2:678.557

BERMAN, I.A.; SERGEYEVA, Ye.G.

X-ray study of diseases of the maxillodental system. Stomatologiia 35 no.5:56-57 S-O '56 (MLRA 10:4)

1. Iz Kurskoy oblastnoy klinicheskoy bol'nitsy (glavnyy vrach A.M. Petrov)
(TEETH--RADIOGRAPHY) (JAWS--RADIOGRAPHY)

BERGMAN, I.A., SERGEYEVA, Ye.G.

New method for X-raying impacted teeth in the upper jaw.
Vest.rent. i rad. 33 no.5:95-96 S-O '58 (MIRA 11:11)

1. Iz Kurskoy gorodskoy klinicheskoy bol'nitsy No.1 (glavnyy vrach E.P. Skripkin).
(JAWS--RADIOGRAPHY)

SHARGEYEVA, YE. I., (Major of the Medical Service) and FRAYMAN, YA. B., (Lieutenant Colonel of the Medical Service)

"The Clinical Aspects of Peptic Ulcer in Young Persons and Generalization on the Experience of Application of Autohemotherapy in the Combined Treatment of Peptic Ulcer"

Voyenno-Meditsinskiv Zhurnal, No. 12, December 1961, pp 62-73

PAVLOVA, I.V.; SERGEYEVA, Ye.I.; MARTIROSOV, L.A.

Epidemiologic effectiveness of preventive inoculation against brucellosis with vaccines at the N packing house. Zhur.mikrobiol.epid. i immun. no.7:40-42 Jl '55. (MLRA 8:9)

(BRUCELLOSIS, prevention and control
vacc. in Russia, of packing house workers)
(VACCINES AND VACCINATION,
brucellosis, in Russia, vacc. of packing house workers)

FRAYMAN, Ya. B., podpolkovnik meditsinskoy sluzhby; SERGEYEVA, Ye. I., mayor meditsinskoy sluzhby

Clinical aspects of peptic ulcer in young persons and the generalization of experience in using autohemotherapy in the compound treatment of peptic ulcer. Voen.-med. zhur. no.12: 67 D '61. (MIRA 15:7)

(PEPTIC ULCER) (BLOOD AS FOOD OR MEDICINE)

SERGEYEVA, Ye.S.

Elimination of trachoma as a widespread disease in the Yalchiki District of the Chuvash A.S.S.R. Kaz.med.zhur. 41 no.1:90-92 Ja-F '60. (MIRA 13:6)

1. Rayonnyy okulist Yal'chinskogo rayona Chuvashskoy ASSR.
(YALCHIKI DISTRICT--CONJUNCTIVITIS, GRANULAR)

15-57-1 341D

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 1, p 52 (USSR)

AUTHOR: Sergeyeva, Ye. S.

TITLE: Petrology of the Anzasskoye Iron Deposit (Petrologiya Anzasskogo zhelezorudnogo mestorozhdeniya) Author's abstract of his dissertation for the degree of Candidata of Geological and Mineralogical Sciences, presented to the Tomskiy politekhn. in-t (Tomsk Polytechnic Institute), Tomsk, 1956

ABSTRACT: The Anzasskoye iron deposit, found by the author in 1952, is located in the Tashtyp Region of the Khakasskaya Autonomous Oblast in Krasnoyarskiy Kray, 100 km southwest from the village of Abaz. This region is made up of metamorphic Precambrian shales which form an anticlinal fold trending to the northeast. The limbs of the anticline fall steeply to the northwest and the southeast. At the core of this anticlinal

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Petrology of the Anzasskoye Iron Deposit (Cont.)

fold lies an elongated intrusion which runs counter to the general northeast trend. This intrusion is composed mainly of albite porphyries and albites, and, only near its periphery, of amphibolized gabbro. It extends 7.5 km in length and 350 m to 900 m in width. Sericite-chlorite schists are developed in the central part of the region along the northwestern and the southeastern contacts of the intrusion; they consist of sericite, chlorite, epidote, quartz and albite. Remnant albite porphyroblasts and also remnant magnetite porphyroblasts can be found in some places. Sericite-epidote schists are associated with the sericite-chlorite schists, with one passing into the other and forming small lenses 2 m to 5 m thick. Quartz-sericite schists gradually pass into quartzites which extend into the sericite-chloride schists and form two fully continuous layers as well as numerous fine lenses. Limestones usually occur between the quartzites and actinolite schists; the existence of intermediate stages between these last two rocks is possible. Actinolite schists overlie the sericite-chlorite ones; they contain an admixture of epidote, sphene, actinolite and magnetite. Quartz-biotite schists

Petrology of the Anzasskoye Iron Deposit (Cont.)

consist of quartz, biotite and of an insignificant admixture of albite, garnet, epidote, magnetite and amphibole; original stratification is preserved in some parts of these schists. In many cases it is impossible to determine the composition of these rocks. All the alterations in the Precambrian rocks are associated with the regional metamorphism. The intrusion was apparently formed along a slowly opening fault, and developed in several stages. The first stage was characterized by the appearance of gabbroidal magma. This was followed by rejuvenation of the fault and intrusion of the next type of magma which produced the albite porphyries. Albites occurred also during the last stage, and now constitute a large portion of the intrusion. Amphibole gabbro consists of plagioclases /An55 to 60, rarely An70 to 75 (40-45 percent of the rock)/ which are often scapolitized, of amphibole which replaces diopside and, partially, plagioclase, and of biotite which replaces amphibole. Secondary minerals (amphiboles, magnetite, biotite, epidote, scapolite) constitute 50 to 60 percent of the rock. Amphibole replacing pyroxene

Petrology of the Anzasskoye Iron Deposit (Cont.)

corresponds in its composition to actinolite and is, in turn, replaced by riebeckite. Albitite porphyries consist of albite with a negligible admixture of green actinolite, epidote, biotite, quartz and sulfides; albite constitutes 75 to 85 percent of the entire rock. These albitite porphyries are intersected by albitite which occurs in veins including numerous fragments of albitite porphyries. Albitites form a large part of the Anzasskaya intrusion. They consist primarily of plagioclases and are almost free of colored components which normally appear as secondary minerals. Albite comprises 90 to 99 percent of albitites. Magnetite occurs in the form of fine dust throughout the entire mass of fractured albitites. Microcline granites occur in the northwestern and in the central part of the intrusion and also in the weathered-out deposits; for this reason it is difficult to determine their relation to the intrusion. The author believes that all the rocks of the Anzasskaya intrusion represent the products of basaltic magma. Structures of albite rocks are commonly allotriomorphically and prismatically granular and

Petrology of the Anzasskoye Iron Deposit (Cont.)

sometimes porphyritic. There are no indications of the metasomatic origin of albite. The Anzasskaya anomaly extends for nearly 5 km. Judging by the character of magnetic anomalies, the ore content and the size of the ore body increases to the northeast and diminishes to the southwest. This formation lies in a fault zone and its ore bodies have the form of lenses. Fractured rocks in the vicinity of these lenses have been thinly filled with the ore material. The ores of the Anzasskiy district are dense and consist of magnetite grains 0.005 mm to 0.1 mm in size; they almost invariably contain pyrite and nonmetallic minerals. Magnetite ores were the first to be formed and were followed by scapolite and actinolite. Riebeckite and biotite were the last to appear. Iron content varies from 40 to 62.5 percent and from 27 to 40 percent.

ASSOCIATION: Tomskiy politekhn. in-t (Tomsk Polytechnic Institute)
S. P. B.

Card 5/5

SERGEYEVA, Ye.S.; BOGNIBOV, V.I.; KHALFIN, S.L.

Age of the Kogtakh gabbro-monzonite-syenite complex. Geol.i geofiz. no.2:87-94 '62. (MIRA 15:4)

1. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR, Novosibirsk.
(Kuznetsk Ala-Tau--Minerals)

IL'IN, [illegible]; SERGEYEVA, L.S., KOVAL'CHUK, M.Ya., tekhnik

[illegible]tem for a defectless production of goods. Tekst. prom. 25 no.5:4-6 My '65. (MIRA 18:5)

1. Direktor Bryanskogo kamvol'nogo kombinata (for Il'in). 2. Nachal'nik otdela truda i zarabotnoy platy Bryanskogo kamvol'nogo kombinata (for Sergeyeva).

SERGEYEVA, Ye.S., kand. med. nauk

Experience in the mass instruction of women in a school for mothers in the Yal'chikskiy District of the Chuvash A.S.S.R. Kaz.med. zhur. No.5: 96-97 S-O'63 (MIRA 16:12)

SERGEYEVA, Ye.S.

Some characteristics and origin of the Ulen'-Tuim granitoid complex. Trudy Inst. geol. i geofiz. Sib. otd. AN SSSR no.33: 145-150 '63. (MIRA 17:11)

SERGEYEVA, Ye.V.; DENISOVA, I.S., redaktor; RAKOV, S.I., tekhnicheskiy redaktor

[Environs of Moscow; tours for sightseers and tourists] Podmoskov'e; ekskursii i turistskie marshruty. Izd. 2-oe, perer. [Moskva] Izd-vo VTsSPS Profizdat, 1956. 386 p. (MLRA 10:1)
(Moscow Province--Description and travel--Guidebooks)

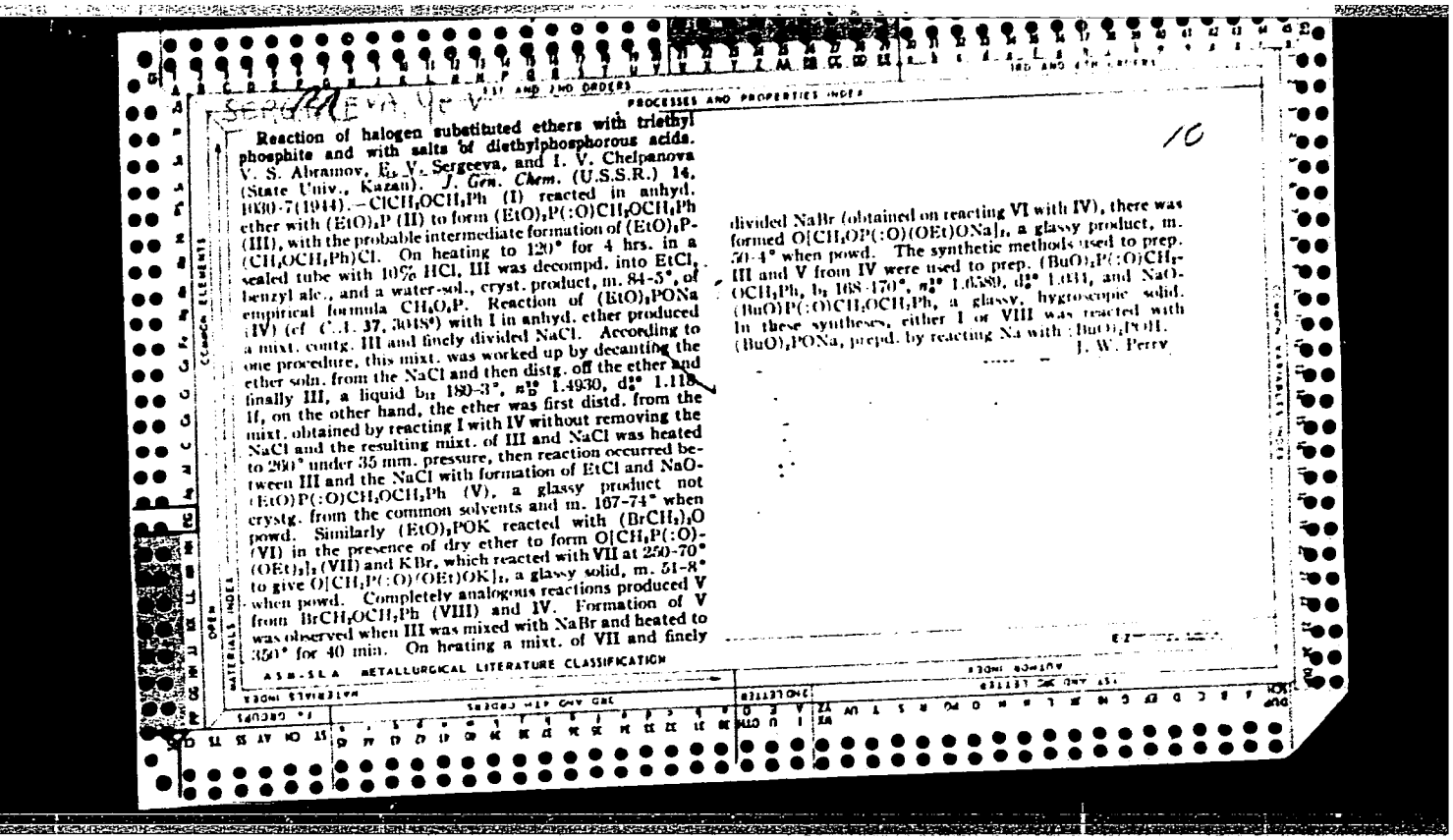
SERGEYEVA, Ye.V.

Phagocytic activity of leukocytes in certain infectious diseases in children [with summary in English]. Pediatriia 36 no.12:59-64 D '58. (MIRA 12:1)

1. Iz kliniki destkikh infektsionnykh bolezney (zav. - prof. D.D. Lebedev) II Moskovskogo meditsinskogo instituta.
(COMMUNICABLE DISEASES, in inf. & child
phagocytic activity (Rus))
(PHAGOCYTOSIS, in various dis.
phagocytic activity in commun. dis. in child (Rus))

ARBUZOVA, Ye. V.

"The Action for Haloethers of Triethylphosphite and on Salts of Diethylphosphorous Acid," Zhur. Obshch. Khim., 14, Nos. 11-12, 1944. Mbr., Lab. Organic Chemistry, Kazan State Univ. im. V. I. Ul'yanov (Lenin), -1943-.



PROCESSES AND PROPERTIES INDEX

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Reaction of halogen substituted ethers with triethyl phosphite and with salts of diethylphosphorous acids. V. S. Abramov, E. V. Sergeeva, and I. V. Chelpanova (State Univ., Kazan). *J. Gen. Chem.* (U.S.S.R.) 14, 1030-7(1944).—$ClCH_2OCH_2Ph$ (I) reacted in anhyd. ether with $(EtO)_3P$ (II) to form $(EtO)_2P(:O)CH_2OCH_2Ph$ (III), with the probable intermediate formation of $(EtO)_2P(CH_2OCH_2Ph)Cl$. On heating to 120° for 4 hrs. in a sealed tube with 10% HCl, III was decompd. into EtCl, benzyl alc., and a water-sol., cryst. product, m. 84–5°, of empirical formula CH_5O_4P. Reaction of $(EtO)_2PONa$ (IV) (cf. C.A. 37, 3018⁹) with I in anhyd. ether produced a mixt. contg. III and finely divided NaCl. According to one procedure, this mixt. was worked up by decanting the ether soln. from the NaCl and then distg. off the ether and finally III, a liquid b_{11} 180–3°, n_D^{25} 1.4930, d_4^{25} 1.118. If, on the other hand, the ether was first distd. from the mixt. obtained by reacting I with IV without removing the NaCl and the resulting mixt. of III and NaCl was heated to 290° under 35 mm. pressure, then reaction occurred between III and the NaCl with formation of EtCl and $NaO(EtO)P(:O)CH_2OCH_2Ph$ (V), a glassy product not crystg. from the common solvents and m. 167–74° when powd. Similarly $(EtO)_2POK$ reacted with $(BrCH_2)_2O$ (VI) in the presence of dry ether to form $O[CH_2P(:O)(OEt)_2]_2$ (VII) and KBr, which reacted with VII at 250–70° to give $O[CH_2P(:O)(OEt)OK]_2$, a glassy solid, m. 51–8° when powd. Completely analogous reactions produced V from $BrCH_2OCH_2Ph$ (VIII) and IV. Formation of V was observed when III was mixed with NaBr and heated to 350° for 40 min. On heating a mixt. of VII and finely divided NaBr (obtained on reacting VI with IV), there was formed $O[CH_2OP(:O)(OEt)ONa]_2$, a glassy product, m. 50–4° when powd. The synthetic methods used to prep. III and V from IV were used to prep. $(BuO)_2P(:O)CH_2OCH_2Ph$, b_3 168–170°, n_D^{25} 1.4580, d_4^{25} 1.031, and $NaO(BuO)P(:O)CH_2OCH_2Ph$, a glassy, hygroscopic solid. In these syntheses, either I or VIII was reacted with $(BuO)_2PONa$, prepd. by reacting Na with $(BuO)_2POH$.

J. W. Perry

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

L 39975-65 EPA(s)-2/EWP(k)/EWP(z)/EWA(c)/EWT(m)/EPA(bb)-2/EWP(b)/T/EWA(d)/EWP(v)/EWP(t) Pf-4/Pt-10/Pad IJP(c) JW/MJW/JD/HM/HW/GS

ACCESSION NR: AT4048087 S/0000/64/000/000/0289/0293

AUTHOR: Shinyayev, A. Ya.; Bondarev, V. V.; Sergeyeva, Ye. V.

TITLE: Investigation of mutual diffusion of titanium with copper and other metals in soldered joints

SOURCE: Soveshchaniye po metallurgii, metallovedeniyu i primeneniyu titana i yego splavov. 5th, Moscow, 1963. Metallovedeniye titana (Metallography of titanium); trudy soveshchaniya. Moscow, Izd-vo Nauka, 1964, 289-293

TOPIC TAGS: titanium, titanium diffusion, titanium copper diffusion, titanium silver diffusion, titanium chromium diffusion, titanium soldering

ABSTRACT: The authors' previous publications have shown that the strength of soldered titanium joints is determined by the phase structure of the diffused layer formed between the titanium and the protective galvanic coating during soldering. Attempts were therefore made to determine the mutual diffusion of titanium and other metals between 200 and 800C in order to evaluate the service life of soldered joints. The tests were made with silver, copper, nickel, Co-Ni alloy (70% Co by weight), chromium, rhodium and rhenium on titanium and AT3, AT4, VT1, VT4, VT5 and

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other titanium alloys. The samples were first etched in 40% sulfuric acid at 80±2C for 10-40 minutes. The kinetics of the process of mutual diffusion were then studied by calculating the rate of mutual diffusion as a function of the working temperature and by finding the phases formed between the titanium and metals dissolved in the titanium. Microscopic analysis was used to observe the mutual diffusion. At temperatures up to 400C, there is almost no diffusion. At 500C, mutual diffusion is observed between titanium and copper, and titanium and silver. Noticeable diffusion between titanium and Ni or Ti and the Co-Ni alloy begins only at temperatures above 600-700C, and for the Cr coating - above 700C. At these temperatures, the service life of soldered joints drops sharply. The service life can also be evaluated by determining the chemical composition of the diffusion zone. This is done by radioactive techniques. The sample is located on a plate which slides along slots made in a holder, and the radiation is registered by a TM-20 meter located above the upper screens of the holder. By means of curves plotted according to the meter readings, and knowing the attenuation coefficient in pure components and in a two-component medium, it is possible to find the distribution of diffused elements in the diffusion zone. The results of this investi-

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gation allow one to conclude that the process of mutual diffusion of titanium with other elements develops at the following temperatures: silver and copper - above 500C, Co-Ni alloy - above 600C, chromium - above 700C. The formation of large (0.2-0.5 micron) zones of a second phase due to micro-cracks in the diffusion zone of a Ti-galvanic coating at working temperatures leads to abrupt weakening of the soldered joint and its failure. Orig. art. has: 3 figures and 1 table.

ASSOCIATION: None

SUBMITTED: 15Jul64 ENCL: 00 SUB CODE: MM

NO REF SOV: 001 OTHER: 001

Card 3/3 MB

LEVINA, S.I.; SERGEYE\A, Yu.V.

Pathogenesis of primary hypertension of the lesser circulation.
Kardiologiia 4 no.6:75-78 N-D '64. (MIRA 18:8)

1. Gospital'naya terapevticheskaya klinika (zav. - doktor med.nauk P.N.Yurenev) pediatricheskogo fakul'teta II Moskovskogo meditsinskogo instituta imeni N.I.Pirogova i Gorodskaya klinicheskaya bol'nitsa Nr. 64 (glavnyy vrach G.V.Rodygina).